



Quality Assurance

General Electric Company's Nuclear Energy Division, San Jose, California produces nuclear reactors for electric power utilities. One aspect of the design and manufacturing process, illustrated in the accompanying photo, is quality assurance testing of the various components used in reactor instrumentation. In this work, the division's engineers and technicians are aided by NASA-developed reliability data on electronic and electromechanical components.

To meet the demanding requirements of spacecraft design and fabrication, Jet Propulsion Laboratory (JPL) developed a set of techniques for evaluating the reliability of components used throughout the electronics

industry. The results of this work were presented in a comprehensive technical report covering 10 general categories of electronic and electromechanical components. For each category, the report provides detailed information on failure modes, stress analysis, and other reliability considerations.

A Nuclear Energy Division engineer learned of the JPL report through *Tech Briefs*, NASA's quarterly publication which announces new technology developed by NASA or by contractors in the course of work for NASA. The engineer requested the report and incorporated its information in the division's quality assurance procedures. Routinely used, the report enables personnel time savings in establishing applicable screening test data that would otherwise require independent research.